

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/693,700 § Examiner: S. Y. Paik
Confirmation No.: 2263 § Art Unit: 3742
Filing Date: October 24, 2003 § Atty. Dkt. No.: 5659-21000/EBM
Inventors: Sandberg et al. §
Title: VARIABLE FREQUENCY §
TEMPERATURE LIMITED §
HEATERS §
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INFORMATION DISCLOSURE STATEMENT

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellant herewith submits an Information Disclosure Statement Pursuant to 37 CFR 1.97 (c). The Information Disclosure Statement includes the Board of Appeals Decision (hereinafter “Decision”) for related co-pending Application No. 10/693,816 filed October 24, 2003 entitled “TEMPERATURE LIMITED HEATERS FOR HEATING SUBSURFACE FORMATIONS OR WELLBORES” to Vinegar et al. (hereinafter “Vinegar”).

Although the claims in Vinegar are different than the claims in the above-captioned patent application, the rejections in the above-reference application are similar in certain ways to the rejection that were made in Vinegar and reversed on appeal.

U.S. Patent. No. 3,757,860 to Pritchett (hereinafter “Pritchett”) was cited in Vinegar.

Pritchett, as noted in the Decision below, “is directed to heating a wellbore casing positioned in the permafrost zone in order to prevent hydrate formation or reduce the viscosity of liquid produced through the wellbore.” U.S. Patent No. 4,716,960 to Eastlund et al. (hereinafter “Eastlund”) was cited in the current application. Eastlund is in a similar field of endeavor as Pritchett as Eastlund provides a system to prevent the formation of solids. Eastlund states: “An object of this invention is to electrically heat the tubing of a petroleum well by passing current through the tubing to **prevent formation of solids** such as paraffin.” (See, Eastlund, col. 1, lines 47-50, emphasis added). In Vinegar, Pritchett was applied in combination with European Patent Application No. 0130671 to Rose (hereinafter “Rose”) and, for certain claims, U.S. Patent No. 5,065,818 to Van Egmond (hereinafter “Van Egmond”). In the current application, Eastlund was applied in combination with Rose and Van Egmond. Thus, because of the similarities between the Pritchett and Eastlund references, the application of cited art in the current application appears to be similar to the application of cited art in Vinegar.

Applicant respectfully requests that claim rejections of the above-captioned patent application be reconsidered in light of the Decision. The Decision states:

OPINION

We have reviewed the Examiner’s rejection in light of the Appellants’ arguments and the Examiner’s response. As a result of this review, we conclude that the claimed subject matter would not have been obvious to a person having ordinary skill in the art with the combined teachings of Pritchett, Rose, Owens, Neuroth, Vanegmond, Bridges, and Bosch. Our reasons follow.

We find Pritchett far afield from the claimed invention. Pritchett is directed to heating a wellbore casing positioned in the permafrost zone in order to prevent hydrate formation or reduce the viscosity of liquid produced through the wellbore. While we concur with the Examiner’s finding that Pritchett uses an A/C power supply, the current does not pass through a hydrocarbon containing layer, but instead migrates to the electrical return casing below the permafrost zone due to the water contained within that layer. We find no evidence, nor has the Examiner directed us to any portion of Pritchett that teaches or suggests this formation layer would be understood by a person having ordinary skill in the art as a hydrocarbon

containing layer. We acknowledge the Examiner's finding that Pritchett's disclosure teaches that the process can be used in wells where a permafrost zone is absent. We acknowledge the Examiner's finding that Pritchett teaches more heating can be tolerated when Pritchett's process is used in a non-permafrost zone. However, the reason that more heating can be tolerated, when the disclosed process is used in a permafrost absent layer, that such a layer is a hydrocarbon containing layer.

We acknowledge the Examiner's finding that Rose teaches an autoregulating heater that regulates sections of the heater based on ferromagnetic material and Curie temperature of the selected layer. **However, we find that, even if a person having ordinary skill in the art were to take Rose's heater and substitute it for Pritchett's heater, there is still no evidence that the autoregulating heater would be located within a hydrocarbon containing layer in order to transfer heat such that the hydrocarbons would be mobilized as called for in the claim.**

The Examiner does not use Owens, Neuroth, Vanegmond, Bridges, or Bosch to remedy the above discussed deficiencies with the combined teachings of Pritchett and Rose.

Conclusion

For the reasons above, we are constrained to reverse the Examiner's obviousness rejections with the combined teachings of Pritchett, Rose, Owens, Neuroth, Vanegmond, Bridges, and Bosch.

(Decision, pages 3-5, emphasis added)

Inventors: Sandberg et al.
Appl. Ser. No.: 10/693,700
Atty. Dckt. No.: 5659-21000

It is believed that no fees are required for the filing of this paper. If any fees are omitted or if fees have been overpaid, please appropriately charge or credit those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel P.C., Deposit Account No. 50-1505/5659-21000/EBM.

Respectfully submitted,

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